

Claims

1. A granulator device (1) for the treatment of powdered products comprising at least one closed container (2) forming a chamber (3) for treatment of the products; filter means (4, 5) projecting into the treatment chamber (3), the filter means (4, 5) comprising at least one multi-layer filtering wall (5) through which at least one fluid current can pass; and powder removing means (6; 7, 8, 9, 10, 11) designed to diffuse at least one service fluid directed towards the filtering wall (5); the device (1) being characterised in that the powder removing means (6; 7, 8, 9, 10, 11) comprise at least a first arm (10) mobile relative to the filtering wall (5) and fitted with first diffuser nozzles (7), the first nozzles (7) being positioned on the first arm (10) in such a way as to gradually cover the length of the surface of the filtering wall (5), as the arm (10) moves, diffusing the service fluid so as to free the filtering wall (5) of the powders trapped in it.

2. The device according to claim 1, characterised in that the filtering wall (5) belongs to a filter (4) which has the shape of a completely hollow solid; the first nozzles (7) projecting towards the filtering wall (5) from the inside of the solid formed by the filter (4).

3. The device according to claim 1 or 2, characterised in that the arm (10) is rotatably mounted about a fixed axis of rotation (14) of the filtering wall (5) to rotate about the axis (14).

4. The device according to any of the claims from 1 to 3, characterised in that the powder removing means (6; 7, 8, 9, 10, 11) also comprise a second arm (11) fitted with second nozzles (8) for diffusing the service fluid; the second arm (11) also being mobile relative to the filtering wall (5).

5. The device according to claim 4, characterised in that the first arm (10) and the second arm (11) are respectively facing opposite faces (12, 13) of the filtering wall (5).

6. The device according to claim 4 or 5, characterised in that the first and second arms (10, 11) are both rotatably mounted about a shared axis of rotation (14) to rotate about the axis (14).

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7. The device according to any of the foregoing claims from 4 to 6, characterised in that the first arm (10) is rotatably mounted to rotate inside the filtering wall (5) and the second arm (11) is rotatably mounted to rotate outside the filtering wall (5).

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8. The device according to any of the claims from 4 to 7, characterised in that the filtering wall (5) belongs to a filter (4) which has the shape of a symmetrical solid; the first and second nozzles (7, 8) being fitted on the respective arms (10, 11) in such a way that they are opposite a limited surface area around a generatrix (17) of the shape of the filtering wall (5) following rotation of the line (17) about the axis (14) of the solid.

9. The device according to any of the claims from 4 to 8, characterised in that the second arm (11) comprises the second nozzles (8) opposite at least one wall (18) of the container (2), rotation of the second arm (11) being designed to allow the removal of powders from the surface of the container (2) wall (18).

25 10. The device according to any of the claims from 1 to 9, characterised in that the service fluid is a pressurised gaseous fluid.

30 11. The device according to any of the claims from 1 to 9, characterised in that the service fluid is a fluid in the wet state.

12. The device according to any of the claims from 4 to 11, characterised in that the filter (4) has the shape of an inverted cover, the first and second arms (10, 11) having a shape matching the meridian profile of the cover.

35 13. The device according to claim 12, characterised in that the cover has an oblique flat base (19).

14. The device according to claim 12 or 13, characterised in that the cover has a cylindrical shape.

5       15. The device according to any of the foregoing claims from 1 to 14, characterised in that the powder removing means (6; 7, 8, 9, 10, 11) comprise third diffuser nozzles (9) attached to one of the walls (18) of the container (2) to diffuse a service fluid in the wet state.